REMARKS

Entry of the Amendment is respectfully requested. Applicants submit the Amendment places the application in condition for allowance and raises no issues not previously considered by the Examiner. After entry of the Amendment, claims 58, 62, 80-90, and 93-105 will be pending.

The Examiner withdrew claim 58. Claims 91 and 92 have been canceled. Claims 62, 80, 85-87, 93, and 100 have been amended to further clarify the claimed invention. Claim 105 is newly presented. Applicants submit the Amendment raises no issues of new matter and is supported throughout the specification, including for example:

Page 15, lines 1-4

The terms "EG-VEGF polypeptide", "EG-VEGF protein", and "EG-VEGF". . . when used herein encompass native sequence EG-VEGF and EG-VEGF polypeptide variants (which are further defined herein).

Page 15, lines 20-26

"EG-VEGF variant polypeptide" means an active EG-VEGF polypeptide as defined below having at least about 80% amino acid sequence identity with the amino acid sequence of (a) residues 1 or about 20 to 105 of the EG-VEGF polypeptide shown in Figure 2 (SEQ ID NO:2), (b) X to 105 of the EG-VEGF polypeptide shown in Figure 2 (SEQ ID NO:2), wherein X is any amino acid residue from 14 to 24 of Figure 2 (SEQ ID NO:2), or (c) another specifically derived fragment of the amino acid sequence shown in Figure 2 (SEQ ID NO:2).

Page 103, lines 19-21

As illustrated in panel a [of Figure 13], EG-VEGF stimulated proliferation of ACE cells with an ED_{50} of 0.2 nM. A maximal effect was observed at approximately 2 nM. The fold increase in cell number was similar to that induced by VEGF.

Page 4, lines 35-29

In another aspect, the present invention provides for a method for identifying a compound that binds to EG-VEGF. . . In one embodiment, the assay is a competitive binding assay, i.e. the ability of the candidate compound to compete with a molecule known to bind EG-VEGF is measured.

Page 95, lines 25-27

This invention also contemplates the use of competitive drug screening assays in which neutralizing antibodies capable of binding EG-VEGF polypeptide specifically compete with a test compound for binding to EG-VEGF or fragments thereof.

Applicants remind the Examiner that claim 62 is a linking claim. For purposes of responding to the final Office Action, the elected species is "antagonist antibodies". Upon indication of allowable subject matter, any claims directed to non-elected species must be rejoined or reinstated and fully examined for patentability (MPEP § 809). To further prosecution, the pending claims are drawn to antagonist antibodies that bind a polypeptide comprising amino acid residues 20-105 of SEQ ID NO:2.

Informalities in Disclosure

The Examiner objected to the disclosure because of several informalities in the text of the specification. Applicants corrected the informality at page 9, line 23 as suggested by the Examiner. Applicants note the informality at page 12, line 19 was corrected in the response to the previous Office Action. Withdrawal of this objection is respectfully requested.

Enablement

Claims 62, 80-84, 88, 91, 92, 94-99, 103, and 104 were rejected under 35 U.S.C. § 112, first paragraph, as lacking enablement. Applicants respectfully traverse this rejection.

An enabling disclosure requires a reasonable correlation to the scope of the claims. As long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement is satisfied (*In re Fischer*, 427 F.2d 833, 839 (CCPA 1970)). For a claimed genus, representative examples coupled with a statement applicable to the genus as a whole are ordinary sufficient to comply with the enablement requirement (MPEP § 2164.02).

Applicants submit the specification, including Examples, sufficiently enables production of antagonist antibodies and antibody fragments that a polypeptide comprising amino acids 20-105 of SEQ ID NO:2. As recited in the amended claims, Example 1 describes isolation of a

cDNA clone encoding such a polypeptide. Examples 2-6 disclose expression of such a polypeptide. Example 14 demonstrates the polypeptide to be an endothelial specific mitogen that acts selectively on a defined endothelial cell type. Example 20 shows that the polypeptide induced angiogenesis in endocrine tissue but had little effect in non-endocrine tissues. Example 7 describes production of antibodies that specifically bind the polypeptide. Example 21 describes immunization of mice with the polypeptide and generation of seven different monoclonal antibodies that bound the polypeptide. Greater than 50% of the hybridomas (four of the seven hybridomas generated) produced antagonist antibodies that inhibited endothelial cell proliferation activity induced by the polypeptide (Example 21 and Figure 21).

In view of the forgoing, Applicants submit the specification and knowledge in the art provides sufficient enabling disclosure to make and use the invention as claimed. Withdrawal of the enablement rejection is respectfully requested.

Written Description

Claims 62, 80-84, 88, 91-92, 94-99, 103, and 104 were rejected under 35 U.S.C. § 112, first paragraph, as lacking written description. Applicants respectfully traverse this rejection.

To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. MPEP § 2163(I) (emphasis added). An Applicant may show possession of an invention by disclosure of sufficiently detailed, relevant identifying characteristics (i.e. complete or partial structure, other physical and/or chemical properties, functional characteristics when coupled with a known or disclosed correlation between structure and function, or some combination of such characteristics) that provide evidence that Applicant was in possession of the claimed invention. *Enzo Biochem v. Gen-Probe*, 323 F.3d 956, 964 (Fed. Cir. 2002); MPEP § 2163(II)(3)(A)(a).

Applying this standard, Applicants submit the specification sufficiently describes the claimed genus of antagonist antibodies. The amended claims are directed to a genus of antagonist antibodies that bind a polypeptide comprising amino acid residues 20-105 of SEQ ID NO:2. As discussed above, the specification describes isolation of a cDNA clone encoding the polypeptide, expression of the polypeptide, production of antibodies that specifically bind the

polypeptide, stimulating proliferation of ACE cells with the polypeptide, immunization of mice with the polypeptide and generation of seven different monoclonal antibodies that each bind the polypeptide, and screening and detecting antagonist antibodies. Antibodies that inhibited the endothelial cell proliferation activity of SEQ ID NO:2 were identified as EG-VEGF antagonist antibodies.

In view of the forgoing, Applicants submit the specification provides sufficient written description of the claimed genus of antagonist antibodies. Withdrawal of the rejection is respectfully requested.

Anticipation

Claims 62, 80-84, 88, 91-99, 103, and 104 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,485,938 (hereinafter the '938 patent), which claims priority to provisional application 60/165,905, filed on November 16, 1999. Applicants respectfully traverse this rejection.

The Examiner alleges the priority date of the rejected claims is September 7, 2000, the filing date of provisional application 60/230,978. Applicants do not agree.

As noted by the Examiner, the present application claims priority to a number of patent applications including provisional application 60/145,698 (hereinafter the '698 application), filed on July 26, 1999. The filing date of at least the '698 application (July 26, 1999) predates the earliest priority date of the '938 patent. The '698 application describes the amino acid and nucleotide sequence for EG-VEGF (see for example pages 278-279 and Figures 65 and 66), demonstrates that EG-VEGF induces proliferation of ACE cells (see for example pages 280-281), and describes antagonist antibodies that bind EG-VEGF (see for example pages 18-19 and 208-215). The cited pages and figures are attached for the Examiner's convenience.

In view of the forgoing, Applicants submit the '938 patent does not anticipate the pending claims. The filing date of the '698 application (July 26, 1999) predates the earliest priority date of the '938 patent. Accordingly, withdrawal of the anticipation rejection under § 102(e) is respectfully requested.

Conclusion

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Respectfully submitted,

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